PB 3/4/04

IN THE CLAIMS:

Please amend the claims as follows:

Claim 1 (Withdrawn) A gene encoding a protein from merozoite of *Babesia caballi*.

Claim 2 (Withdrawn) The gene of claim 1 wherein said protein is a protein that has the amino acid sequence shown in SEQ ID NO: 2, or a protein that has the amino acid sequence shown in SEQ ID NO: 2 with one to several amino acid residues therein being deleted, substituted or added and that is immunologically reactive with an antibody or antiserum elicited by a 48kDa protein of rhoptry of *Babesia caballi* merozoite.

Claim 3 (Withdrawn) The gene of claim 1 or 2 wherein said gene has the nucleotide sequence shown in SEQ ID NO: 1, or has a nucleotide sequence that hybridizes to a complementary sequence to the nucleotide sequence shown in SEQ ID NO: 1 and encodes a protein that is immunologically reactive with an antibody or antiserum elicited by a 48kDa protein of rhoptry of *Babesia caballi* merozoite.

Claim 4 (Currently Amended) An isolated recombinant protein from merozoite of *Babesia caballi*, wherein said protein is expressed in a host cell transformed with a DNA vector into which cDNA having the nucleotide sequence encoding the amino

acid sequence as shown in SEQ ID NO: 2~~, or cDNA having the nucleotide sequence encoding the amino acid sequence as shown in SEQ ID NO: 2 with one to several amino acid residues therein being deleted, substituted or added,~~ is incorporated into the DNA vector.

Claim 5 (Previously Presented) The isolated recombinant protein of claim 1, wherein said protein ~~is immunologically reactive with~~ an antibody or antiserum ~~elicited by a 48kDa protein of rhoptry of~~ *Babesia caballi* merozoite.

Claim 6 (Cancelled)

Claim 7 (Withdrawn) Lysogenic bacteria with recombinant phage expressing a 48kDa protein of rhoptry of *Babesia caballi* merozoite, which is prepared by infecting *E. coli* with phage into which cDNA having the nucleotide sequence encoding the amino acid sequence shown in SEQ ID NO: 2 is incorporated.

Claim 8 (Withdrawn) An antibody capable of binding to a 48kDa protein of rhoptry of *Babesia caballi* merozoite.

Claim 9 (Withdrawn) The antibody of claim 8 wherein said protein is a naturally occurring protein or a recombinant protein.

Claim 10 (Withdrawn) The antibody of claim 8 or 9 wherein said antibody is a monoclonal antibody.

Claim ~~11~~ 3 (Previously Presented) An antigen comprising the recombinant protein from merozoite of *Babesia caballi* as set forth in claim ~~1~~ 1.

Claim 12 (Withdrawn) A method for diagnosing equine babesiasis which comprises specifically detecting anti-*Babesia caballi* antibody present in equine blood by using the antigen as set forth in claim 11.

Claim 13 (Withdrawn) A method for diagnosing equine babesiasis which comprises detecting the presence of *Babesia caballi* merozoite in equine blood by using the antibody capable specifically binding to a 48kDa protein of rhoptry of *Babesia caballi* merozoite.